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EXAMINER

WASSUM, LUKE S

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 04/19/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/858,438

Applicant(s)

RYAN ET AL.

Examiner

Luke S. Wassum

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Applicants' amendment, filed 4 March 2004, has been received, entered into the record, and considered.
2. As a result of the amendment, claims 1, 4, 10, 14, 27 and 29 have been amended, and new claim 30 has been added. Claims 1-30 are now presented for examination.

Priority

3. The Applicants' claim to priority under 35 U.S.C. 119(e), based upon provisional application number 60/204,720, filed 16 May 2000, is acknowledged.

Claim Objections

4. In view of the amendments to claims 4, 10 and 29, the examiner has withdrawn the pending claim objections.

Claim Rejections - 35 USC § 112

5. In view of the amendment to claim 14, the examiner has withdrawn the claim rejection under 35 U.S.C. § 112.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by **Marlin et al.** (U.S. Patent 5,778,377).

8. Regarding claim 1, **Marlin et al.** teaches a method for a virtual finishing job ticket database as claimed, comprising:

- a) storing in the database a list of capability and permanent constraint attributes for each available finishing device (see finishing object 40 in Figure 7; see also col. 11, lines 21-27);
- b) receiving finishing job description information, including descriptions of job segments of the job (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18); and
- c) storing the finishing job description information in the database (see object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18).

9. Regarding claim 27, **Marlin et al.** teaches a method for a database system, comprising:

- a) storing capability and permanent constraint attributes in the database (see finishing object 40 in Figure 7; see also col. 11, lines 21-27);
 - b) communicating the capability and constraint attributes to the production monitor controller (see disclosure of the interface to the Management Information Format (MIF) file, col. 5, lines 19-31; see also disclosure of the agent programs, and particularly the management reports agent, col. 11, lines 31-60);
 - c) creating a job model location within the database for storing a description of the job and its components, including job segments (see object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18);
 - d) receiving from the production monitor controller information that describes the job and its components, including descriptions of job segments of the job (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18); and
 - e) storing the description of the job and its components, including job segments, in the job model location within the database (see object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18).
10. Regarding claim 28, **Marlin et al.** teaches a virtual finishing job ticket database comprising:
- a) job construction data (see object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18);
 - b) control data for instructing performance of at least one finishing device (see process object 38 in Figure 7; see also col. 11, lines 15-18); and

c) integrity data used after performance of the finishing device in order to confirm that the job was finished in accordance with the job construction data (see disclosure that prior art systems included an error recovery operation such that if a job is completed without incident, that can be recorded, col. 3, lines 43-45).

11. Regarding claim 29, **Marlin et al.** additionally teaches a virtual finishing job ticket database wherein the job construction data, control data and integrity data are stored in hierarchically arranged nodes of information (see Figure 10B; see also col. 17, lines 17-26).

12. Regarding claim 30, **Marlin et al.** additionally teaches a virtual finishing job ticket database further comprising retrieving from the database an entire virtual finishing job ticket from information provided by a single job segment identifier (see disclosure of the MIF meta-data tree, defining a product object, analogous to the claimed entire virtual finishing job ticket, Figure 10B; see also in cited prior art document "Large Mailing Operations Standards Specification, Version 1.0", published 31 October 1994, incorporated by reference by the **Marlin et al.** patent at col. 5, lines 42-46, the fact that Mail Job Objects, and specifically Print Job Entries, each contain a Product Name object and a Product Instance Qualifier object, the combination of which is necessary to insure unique key access to table entries in the Product Object table at page 37, thus providing the claimed functionality).

13. Regarding claim 2, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving job description information comprises receiving a description of finishing operations for a job comprising printed sheet workpieces (see col. 4, lines

Art Unit: 2177

16-38, particularly lines 21-24; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18).

14. Regarding claim 3, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving finishing job description information comprises receiving such information from a production monitor controller (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18).

15. Regarding claim 4, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving comprises receiving reference pointers to locations where some specific job description information is stored (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18).

16. Regarding claim 5, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database further comprising arranging finishing job description information in a hierarchical manner (see Figure 10B; see also col. 17, lines 17-26).

17. Regarding claim 6, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of arranging further comprises arranging in a hierarchical tree structure (see Figure 10B; see also col. 17, lines 17-26).

Art Unit: 2177

18. Regarding claim 7, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of arranging in a hierarchical manner further comprises including, within at least one node at each level within the hierarchy of nodes, reference pointers to at least one node at a different level in the hierarchy such that all nodes of a job are referenced by at least one other node within the hierarchy arrangement of nodes (see Figure 10B; see also col. 17, lines 17-26).

19. Regarding claim 8, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of arranging further comprises arranging a top level node comprising job identification data (see disclosure that the concept of components includes mail jobs, col. 12, lines 28-31; see also col. 13, lines 9-18; see also Figure 10B; see also col. 17, lines 17-26).

20. Regarding claim 9, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of arranging a top level node further comprises including within the top level node reference pointers to at least one node at a hierarchical level below the top level (see Figure 10B; see also col. 17, lines 17-26).

21. Regarding claim 10, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database, further comprising including at least one node within the hierarchy of nodes in which one of a pre-designated list of document forms is identified as applying to a document to be finished during the finishing job (see disclosure that the concept of components includes mail jobs, col. 12, lines 28-31; see also col. 13, lines 9-18; see also disclosure of the object class, mail job object class, process object class and finishing object class, col. 11, lines 5-27; see also Figure 10B; see also col. 17, lines 17-26).

22. Regarding claim 11, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database, further comprising using a reference pointer within at least one node to a list of attributes of the identified document form, which list is stored outside of the node itself (see Figure 10B; see also col. 17, lines 17-26; see also disclosure of the object class, mail job object class, process object class and finishing object class, col. 11, lines 5-27).

23. Regarding claim 12, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving comprises receiving from the production monitor controller job model information comprising information associated with possible threads for production of the finishing job (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and particularly the process object 38 in Figure 7; see also col. 11, lines 1-18).

24. Regarding claim 13, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving job model information further comprises receiving build sequence information for production of the finishing job (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and particularly the process object 38 in Figure 7; see also col. 11, lines 1-18).

25. Regarding claim 14, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving build sequence information includes receiving information for programming operation of at least one finishing device to be used during the

Art Unit: 2177

finishing job (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and particularly the process object 38 in Figure 7; see also col. 11, lines 1-18).

26. Regarding claim 15, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of storing further comprises storing information for different job segments in different nodes within a hierarchy of nodes (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18; see also disclosure that the concept of components includes mail jobs, col. 12, lines 28-31; see also col. 13, lines 9-18; see also Figure 10B; see also col. 17, lines 17-26).

27. Regarding claim 16, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of storing further comprises storing information in a plurality of nodes at the same level within a hierarchy of nodes (see disclosure that the concept of components includes mail jobs, col. 12, lines 28-31; see also col. 13, lines 9-18; see also Figure 10B; see also col. 17, lines 17-26).

28. Regarding claim 17, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving further comprises receiving information associated with job segments produced by different production equipment and wherein the step of storing further comprises storing information describing such different job segments in different nodes of the virtual finishing job ticket database (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18; see also

Art Unit: 2177

disclosure that the concept of components includes mail jobs, col. 12, lines 28-31; see also col. 13, lines 9-18; see also Figure 10B; see also col. 17, lines 17-26).

29. Regarding claim 18, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database further comprising creating an information node within the virtual finishing job ticket database wherein descriptive information of a job segment is stored, such as job segment comprising a combination of a plurality of job segments produced by different production equipment (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18; see also disclosure that the concept of components includes mail jobs, col. 12, lines 28-31; see also col. 13, lines 9-18; see also Figure 10B; see also col. 17, lines 17-26).

30. Regarding claim 19, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving further comprises receiving the finishing job description information from a production monitor controller (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18).

31. Regarding claim 20, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database further comprising providing access to the stored finishing job description information to a finishing module controller (see col. 5, lines 7-32).

Art Unit: 2177

32. Regarding claim 21, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database further comprising associating the stored finishing job description information regarding at least one job segment with a job segment identifier code such that such stored information can be accessed through use of the job segment identifier code (see col. 12, lines 46-59; see also col. 13, lines 9-18).

33. Regarding claim 22, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving further comprises receiving a digital copy of a virtual finishing job ticket (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18).

34. Regarding claim 23, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of storing capability and constraint attributes comprises storing capability and constraint attributes for all finishing devices usable for the finishing job (see disclosure of the finishing object, col. 11, lines 21-27; see also col. 13, lines 9-30).

35. Regarding claim 24, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the availability of a finishing device is one of the attributes stored in the virtual finishing job ticket database (see col. 11, lines 40-60).

36. Regarding claim 25, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving comprises receiving data for controlling at least one

Art Unit: 2177

finishing device (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18).

37. Regarding claim 26, **Marlin et al.** additionally teaches a method for a virtual finishing job ticket database wherein the step of receiving comprises receiving integrity data used after performance of the finishing device in order to confirm that the job was finished in accordance with the job description data (see col. 4, lines 16-38; see also object class 35, mail job object 36, mail piece object 37 and process object 38 in Figure 7; see also col. 11, lines 1-18; see also disclosure that prior art systems included an error recovery operation such that if a job is completed without incident, that can be recorded, col. 3, lines 43-45).

Response to Arguments

38. Applicant's arguments filed 4 March 2004 have been fully considered but they are not persuasive.

39. The Applicants argue that the **Marlin et al.** reference fails to teach a database including 'permanent constraints' for the finishing devices. The term 'permanent constraints' is not explicitly defined in the Applicants' disclosure, but examples are given: inflexible bin heights and widths, temperature limits for laminators, bin type (set feeder or sheet feeder), method of feed (top or bottom feeder)...and similar limits related to the device's design.

The **Marlin et al.** reference teaches a system that includes a management information file (MIF) database, which stores, among other things, finishing objects which describe the attributes of those devices that do the processing on the finishing line (col. 11, lines 21-26). The MIF files are files that describe components and their attributes, including such attributes as the input and output characteristics of printers (col. 12, lines 4-27). These disclosed characteristics would anticipate the claimed 'permanent constraints'.

Further support for this fact can be found in the cited prior art document "Large Mailing Operations Standards Specification, Version 1.0", published 31 October 1994, which provides a more detailed disclosure of the MIF format, including numerous MIF Objects that would qualify as 'permanent constraints' under the Applicants' disclosed guidelines.

Specific examples include the following objects: Printer Output Device Dimensions Extended, pages 59-60; Printer Output Features, pages 60-61; Printer Output Associated Finisher, pages 61-63; Finisher Input Device Entry, pages 69-72; Finisher Input Media Extended, pages 73-74; Finisher Feature Entry, pages 74-79; Finisher Output Device, pages 79-81; Finisher Output Device Extended, pages 82-83; Finisher Output Device Features, pages 83-84, et seq. All these objects being part of the Management Information Object (MIF) format, the format disclosed as being used in the **Marlin et al.** reference, the reference does indeed teach the claimed 'permanent constraints'.

40. The Applicants argue that the **Marlin et al.** reference fails to teach "job description information" including descriptions of "job segments" of the job. In the specification, the job segment is defined as "a stack of sheets produced by a common printing or finishing process and conforming to the same printing and finishing constraints", and that they are "identified in order

Art Unit: 2177

that document components with similar printing and/or finishing requirements are grouped together for efficient printing, handling and finishing”.

Regarding this argument, the examiner responds that the **Marlin et al.** reference teaches the use of object classes (analogous to the claimed ‘job’) comprising mail job objects (analogous to the claimed ‘job segments’), said mail job objects comprising a “manageable segment of the total product” (col. 11, lines 7-11), and mail piece objects (analogous to the claimed ‘document component’).

The mail job object of **Marlin et al.** satisfies the disclosed definition of a job segment as “a stack of sheets produced by a common printing or finishing process and conforming to the same printing and finishing constraints”. Likewise, the mail piece object of **Marlin et al.** satisfies the disclosed definition of a document component as “a collection of one or more sequential sheets of media that have similar qualities or characteristics and thus would be printed or non-printed and would be finished or produced in a similar manner”.

The Applicants are reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

41. The Applicants argue that the **Marlin et al.** reference fails to teach “control data for instructing performance of a finishing device”.

Regarding this argument, the examiner directs the Applicants' attention to item 21G in Figure 6, "Finishing Instructions", and to the relevant disclosure in the specification at col. 4, line 44 through col. 5, line 18, particularly col. 5, lines 7-18.

Further support for the inclusion of the claimed "control data" can be found in the cited prior art document "Large Mailing Operations Standards Specification, Version 1.0", published 31 October 1994, which discloses in the description of the Process Path Table on page 33 that the process objects taught in the **Marlin et al.** reference and cited in the rejection of record comprise a sequence of steps that a product goes through to produce print data for mailing and may be automated by some systems...entries appear *in the order to be invoked* for the product." The disclosure that the entries are invoked supports the examiner's interpretation that the process object anticipates the claimed "control data".

Further supporting this interpretation is the disclosure at col. 9, lines 53-56 that "Attributes about products, mail jobs, insert jobs, printers, inserters, supplies, machine set-ups and *finishing instructions* may all be found in the object model of the various components of the system."

42. The Applicants argue that the **Marlin et al.** reference fails to teach the ability to retrieve the entire job construction data by accessing a single job segment identifier.

Regarding this argument, the examiner responds that no such limitation is explicitly claimed, except for in the newly added claim 30.

Furthermore, the examiner refers the Applicants to the disclosure of the Management Information Format (MIF) in the cited prior art document "Large Mailing Operations Standards

Specification, Version 1.0", published 31 October 1994. Therein, the hierarchical nature of the data stored in the MIF format is apparent. Thus, the rejection of record is maintained.

43. The Applicants argue that the **Marlin et al.** reference fails to teach the notion of a 'document form'.

Regarding this argument, the examiner responds that the use of a mail job object anticipates the claimed limitation, as it comprises an indication that the document in question is a mail job, a mail job being analogous to the claimed 'document form'.

Conclusion

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Marlin et al. (U.S. Patent 5,758,074) teaches a system for enabling the use of the Desktop Management Interface (DMI) in a network where the particular computing system containing the DMI and its database reside on one node and where management applications and devices (instrumented components) reside at other nodes.

Hansen et al. (U.S. Patent 6,407,820) teaches a system for managing the production printing workflow of documents.

DMTF ("Desktop Management Interface Specification, Version 1.0") defines a set of rules for describing and obtaining management information for the hardware and software components of desktop computers.

Art Unit: 2177

Marlin et al. ("Large Mailing Operations Standards Specification, Version 1.0") defines a standard set of interfaces, objects and management protocols for managing hardware and software components and work flow processes in a Large Mailing Operation environment.

DMTF ("Desktop Management Interface Specification, Version 2.0s" describes the Desktop Management Interface (DMI) that acts as a layer of abstraction between management software and a computer system's components that require management.

45. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 703-305-5706. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

In addition, INFORMAL or DRAFT communications may be faxed directly to the examiner at 703-746-5658.

Customer Service for Tech Center 2100 can be reached during regular business hours at (703) 306-5631, or fax (703) 746-7240.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Luke S. Wassum
Art Unit 2177

lsw
12 April 2004